



ZEEMAIL



Zeeospheres® Ceramics, LLC

129 Valentine Drive, Lockport, Louisiana 70374

May 1st, 2013

Starting Formulations Containing Zeeospheres And Wollastonite

Below you can find two different anti-corrosive epoxy primers in which Zeeospheres co-exist with Wollastonite in the formulation.

2 Pack Water Base Epoxy Anti-Corrosion Primer Based on Beckopox EP 385w and Beckopox VEH 2106w

Ingredients	Description/Supplier	Pounds	Gallons
Part A:			
Delonized Water		81.70	9.81
PM	Propylene glycol methylether co-solvent, Lyondell	20.40	2.65
PnB	Propylene glycol methylether co-solvent, Lyondell	20.40	2.79
BYK-190	Dispersant, Byk Chemie	15.30	1.73
<i>Add the pigments while mixing</i>			
Mica WG-325	Wet Ground Mica, Oglebay Norton Minerals	7.80	0.33
Bartex #65	Barium Sulfate, Hitox	65.00	1.79
Bayferrox 130M	Red Iron Oxide, Bayer	65.00	1.56
Zeeospheres G-400	Ceramic Microspheres, Zeeospheres Ceramics LLC	65.00	3.25
10 ES Wollastocoat	Calcium Metasilicate, NYCO	98.00	4.05
SW-111	Corrosion Inhibiting Pigment, HALOX	88.00	3.68
<i>High speed disperse to Hegman 6. Caution: Add the following at slow speed. Do not exceed 40 ° C (104 ° F)</i>			
Beckopox® EP385w	Epoxy Dispersions, Solutia	507.20	55.86
SUBTOTAL		1033.80	87.50
PART B:			
Beckopox® VEH 2106w	Epoxy Dispersions, Solutia	40.50	4.50
Deionized Water		66.66	8.00
<i>Do not exceed 40 ° C (104 ° F) while mixing</i>			
SUBTOTAL		107.16	12.50
TOTAL		1140.96	100.00

PHONE
504-613-7377

EMAIL
jeff@zeeospheres.com

WEB
www.zeeospheres.com

Properties	
Mix Ratio (by weight)	100:10.4
Mix Ratio (by Volume)	7:1
Pot0Life (hours)	4
% Weight Solids	62.4
% Volume Solids	47.6
PVC	30.8
VOC (g/l)	112
pH	9-10
Viscosity-Stormer (Krebs Units)	85
Sag Resistance (mils)	14
Cross Hatch Adhesion	5B
Pencil Hardness (7 days)	HB-F
MEK D. Rub	65
Impact (In-lbs)	120
<i>Drying Time (ASTM D1640) at 3 mil DFT:</i>	
Dry to Touch	15 Minutes
Dry Hard	4 Hours
Dry Through	6 Hours
<i>Recoat Time</i>	
Waterborne	4-8 Hours
Solvenborne	16-24 Hours

Corrosion Resistance:

3-4 mil DFT on sand (or equivalent) blasted hot rolled steel or 2 mil DFT on Bonderite 1000 panels tested after 7 Days Ambient cure: Salt

Fog (ASTM B 117): 2000 Hours

Prohesion (ASTM G85): 2000 Hours

Humidity (ASTM D 4585): 2000 Hours

2K Water Based Epoxy Dispersion Primer using HALOX 430

COMPONENT A:			
<u>GRIND</u>	<u>LBS</u>	<u>GALS</u>	<u>%Wt/Wt.</u>
Water	25.36	3.04	2.17
Eastman PM Solvent	24.35	3.17	2.08
Dowanol PnB	24.35	3.30	2.08
Additol VXW 6208	18.26	2.08	1.56
BYK-024	1.52	0.18	0.13
Beckopox VEP 2382w/55WA			
<i>Mix well; then add:</i>			
Bayferrix 130M	73.04	1.75	6.25
HALOX 430	58.43	2.67	5.00
325 mesh Wet Ground Mica	8.72	0.37	0.74
Bartex 65	73.04	2.01	6.25
Zeeospheres G-400	73.04	3.65	6.25
Wollastocoat 10ES	149.69	6.19	12.80
<i>High speed disperse to a 5+ NS Hegman grind.</i>			
Beckopox VEP 2382w/55WA	50.72	5.63	4.34
Water	43.59	5.22	3.73
COMPONENT B:			
Beckopox VEP 2188w/55WAMP	100.55	11.16	8.60
Water	28.74	3.44	2.45
<i>Adjust to desired viscosity with water.</i>			
TOTAL A & B	1169.32	100.00	100.00

FORMULA CONSTANTS

%Pigment/Wt.	37.28
%Pigment/Vol.	16.63
%Solids/Wt.	64.87
%Solids/Vol.	49.84
%PVC	34.17
VOC lbs./gal.	1.33
g/L	159.05

FORMULA PROPERTIES

Density	11.69 lbs./gal
Density	1401.32 g/L
pH @ 25 °C	9.0-9.5
Part A+B Stormer Visc. @ 25 °C	100-110 KU
Mix Ratio by Volume (A:B)	5.8:1
Mix Ratio by Weight (A:B)	8:1 VOC
Pot Life	1-2 hrs.